R842-05 ERIC REPORT RESUME

ED 010 280 2-28-67 08 (REV)

GROUNDSMAN-GARDENER FOR SPECIAL CLASS STUDENTS (EDUCABLE MENTALLY RETARDED YOUTH), FINAL REPORT.

NICOLAYSEN, G. ROY
BVE07792 OAKLAND UNIFIED SCHOOL DISTRICT, CALIF.

ERD-315-65
BR-5-0178
22-JUL-65 OEG-4-6-050178-1838
EDRS PRICE MF-$0.09 HC-$1.32 33P.

*EDUCABLE MENTALLY HANDICAPPED, PILOT PROJECTS, *SUMMER PROGRAMS, SPECIAL CLASSES, VOCATIONAL REHABILITATION, *HIGH SCHOOL STUDENTS, *OCCUPATIONAL TRAINING, SERVICE EDUCATION, SERVICE OCCUPATIONS, *WORK EXPERIENCE PROGRAMS, OAKLAND, CALIFORNIA

A SUMMER PILOT PROGRAM WAS CONDUCTED TO VOCATIONALLY TRAIN EDUCABLE MENTALLY RETARDED (EMR) STUDENTS. SPECIAL CLASS STUDENTS (16) IN THE 11TH AND 12TH GRADES WERE ENROLLED AND SUCCESSFULLY COMPLETED THE 6-WEEK COURSE. THE GROUNDSMAN-GARDENER COURSE WAS DIVIDED INTO TWO PARTS, CLASSROOM STUDY AND WORK EXPERIENCE. THE GOALS TO BE REALIZED WERE (1) TRAINING AND PLACEMENT OF EMR STUDENTS, (2) STUDENT ABSORPTION INTO THE REGULAR CLASS PROGRAM, (3) PART-TIME EMPLOYMENT, AND (4) CONTINUED TRAINING AS DEPARTMENT OF VOCATIONAL REHABILITATION CLIENTS. IN EVALUATING THE PROGRAM, THE PARTICIPANTS CONCLUDED THAT ALL OF THE GOALS WERE MET, AND THE OVERALL SUCCESS OF THE PROGRAM WAS ATTRIBUTED TO THE PLANNED CURRICULUM. RECOMMENDATIONS WERE MADE THAT THE PROGRAM BE EXPANDED TO AFFORD OPPORTUNITY TO MORE EMR STUDENTS. (RS)

ED010280

5-0178
(ERD-315-65)

FINAL REPORT

Groundsman-Gardener for Special Class Students (Educable Mentally Retarded Youth), FINAL REPORT

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education
This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated do not necessarily represent official Office of Education position or policy.

ED010280

Oakland Unified School District
1025 Second Avenue
Oakland, California 94606

July 22, 1966

Table of Contents

		Page
I	Description of Project	1
II	Procedure	2
III	Evaluation	3
IV	Summary and Conclusions	4
	Appendices:	
	A. Pupil Invitation	5
	B. Parental Consent Slip	6
	C. Student Eligibility Check List	7
	D. Course Outline with Lesson Plans	8-20
	E. Pictorial Description of Work-Experience Activities	21
	F. Evaluation	
	1. Work-Experience Questionnaire	22
	2. Student Reaction Questionnaire	23
	3. Department of Vocational Rehabilitation Report of Progress in Training	24
	4. Letters	25-26
	5. Award Certificate	27
	G. Bibliography	
	1. Books and Periodicals	28
	2. Audio-Visual Materials	29

I DESCRIPTION OF PROJECT

Project Title: GROUNDSMAN-GARDENER FOR SPECIAL CLASS STUDENTS (Educable Mentally Retarded Youth)

Author: G. Roy Nicolaysen, Teacher on Special Assignment for Vocational Training and Placement of Mentally Retarded Youth, 1025 Second Avenue, Oakland, California 94606.

Grant Number: OEG-4-6-050178-1838, the Vocational Education Act of 1963, P.L. 88-210, Section 4 (c).

Project Number: 5-0178

Grantee Institution: Oakland Unified School District, 1025 Second Avenue, Oakland, California 94606.

Date of Report: July 22, 1966

The Project Reported Herein was Supported by a Grant from the U.S. Department of Health, Education and Welfare Office of Education, Bureau of Research, Division of Adult and Vocational Research.

II PROCEDURE

A letter of invitation was sent during May, 1966, to the eleventh and twelfth grade special class students of the Oakland Senior High Schools to participate in this pilot summer school Groundsman-Gardener activitity allowing one unit of elective Senior High School credit. Twenty-five students and their parents indicated an interest--seventeen actually signed for the program. One student dropped out during the first day because of employment. Sixteen students enrolled and successfully completed the six-week course.

All participating students became clients of the Department of Vocational Rehabilitation after completing the requirements of that agency (see Appendix C).

The Groundsman-Gardener course was divided into two parts: (1) classroom study; (2) actual work experience in the field. The classroom curriculum was designed to accommodate the academic ability levels of these particular students and included six areas of interest (see Appendix D). Each student kept a notebook in which he recorded assignments and information pertinent to horticulture throughout the six-week course. The notebooks were collected and graded by the instructor and returned to the students on the final day of the session. The classroom curriculum was taught during the $2\frac{1}{2}$ hour morning session through the following techniques: lecture, observation, audio-visual materials and elementary research.

For the two-hour afternoon activity a planned program of work experience was initiated. The Montclair Recreation Center and Park area were used as the field laboratory. This area was selected because of the relative proximity to the school site classroom and because of the general debilitation of the grounds and shrubbery (see Appendix E).

The park area encompassed approximately 135,000 square feet, most of which was in a tangled state of shrubs, trees and undergrowth.

The major project was the clearing--preparation of soil and replanting of a rather steep hillside plot which overlooked the park and adjoining tennis courts (see Appendix E-7-10). The students were divided into teams for the various projects. These projects included pruning, trimming, grubbing, hoeing, soil preparation, planting and watering. The teams were rotated to enable <u>each</u> student an opportunity to gain experience in each of the various skills.

A daily training allowance of $2.50 was paid each student for the work-experience phase of the program (see Appendix F-3).

All agencies involved, as well as the local community, expressed satisfaction at the conclusion of the activity (see Appendix F-4).

III EVALUATION

The primary objective was to train educable mentally retarded students for employment in the Groundsman-Gardener field and for placement in the Landscape-Nurseryman Aide course, and/or enrollment in post-graduate Groundsman-Gardener training (see Appendix F-1).

Of the sixteen (16) students enrolled, one is looking for part-time gardening work, two will enroll in the regular Groundsman-Gardener class in the Fall, 1966, six will request Gardener's Aide work-experience stations, three will request further gardening training, two are presently undecided and two have given no response.

To further establish attitudes toward the total course, a second evaluatory device was used (see Appendix F-2):

3 indicated preference for afternoon session,
13 liked both morning and afternoon sessions.

9 would recommend the course to their friends,
5 were not sure;
2 would not recommend the course.

3 were taking the course for money,
1 took it for high school credit;
12 were taking the course for both money and credit.

Two (2) of the students were placed in part-time gardening work at the conclusion of the course and one student will receive further on-the-job training as the direct client of the Department of Vocational Rehabilitation.

IV SUMMARY AND CONCLUSIONS

The vocational goals of the pilot program were apparently realized. They were the following:

1. Job training and placement of Educable Mentally Retarded students.
2. Educable Mentally Retarded student absorbtion into the regular class Groundsman-Gardener program.
3. Part-time employment of Educable Mentally Retarded students.
4. Continued training as Department of Vocational Rehabilitation clients.

Specific vocational training objectives were met which included field instruction and student performance in the following: grubbing, hoeing, trimming, pruning, spraying, planting, litter removal, soil preparation, potting, transplanting and conservation.

Classroom activities supplied the elementary principles of gardening and grounds-keeping procedures. The afternoon Work-Experience session gave opportunity for the practical application of gardening and grounds-keeping skills.

It was felt that the basic text, "The Western Gardening Book", suggested in the original proposal was far too technical and advanced for the academic level of the Educable Mentally Retarded students. Another text, "Living Things", was substituted and proved successful (see Appendix G-1).

The overall success of this program was due in the main to the planned curriculum by both specialists in the field of Mental Retardation and by professional technical advisors in the field of horticulture. Continuous supervision added to the success of the project. There were no drop-outs as attested by class attendance records, absenteeism was held to a minimum and attitudes and enthusiasm remained constantly at a high level.

It is recommended by this report that the Groundsman-Gardener program for Educable Mentally Retarded students be continued and expanded to afford opportunity for more such students to participate in a summer training program.

OAKLAND PUBLIC SCHOOLS
Division of Special Services
Department of Special Education

Dear

Your son _____ is eligible to take part in a Summer Work Experience Program at Oakland High School in the Groundsman-Gardener Course sponsored by the Federal Government and the State Department of Vocational Rehabilitation.

This will be a six-week course beginning June 13 and ending July 22. The hours will be from 9:00 a.m. - 3:30 p.m. Students will be given related classroom instruction in the morning and supervised field work during the afternoon in various selected park areas. Transportation will be furnished, enabling the students to return to Oakland High School in the afternoon.

One unit of high school credit plus a $2.50 daily training allowance will be granted each student who satisfactorily completes the course.

It is hoped that you will allow your son to take part in this worthwhile program. Therefore, would you please sign the attached slip and return it to the school so we may save a place for your son and have a record of your permission.

Any further questions concerning this program may be answered by calling Mr. G. Roy Nicolaysen, Department of Special Education, Oakland Public Schools, at 836-2622, Extension 747.

Sincerely yours,

_____
(Teacher's signature)

GRN:vmr
Att. (1)

I GIVE PERMISSION FOR _____

TO TAKE PART IN THE GROUNDSMAN-GARDENER COURSE TO BE GIVEN AT OAKLAND HIGH SCHOOL FROM June 13 - July 22, 1966.

_____ _____

(date) (parent's signature)

Work Experience
Check List
School _____
Name of Student

	I - a Parent Permit	I - b OPS Refer Form	I - c Soc. Sec. Tax No.	I - d With Exemp. W-4	I - e OPS Seek Emp.	I - f Loyal Oath	I - g - j State Permit to Employ	I - k DVR Civil Rights	Notes
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									
16.									
17.									
18.									

Appendix D

GROUNDSMAN-GARDENER COURSE OUTLINE

Summer - 1966

OAKLAND HIGH SCHOOL

Unit I — Water
- a) Source
- b) Water Cycle
- c) Weather
- d) Irrigation

Unit II — Soil
- a) Rocks
- b) Erosion
- c) Soil Types
- d) Conditioning

Unit III — Plants
- a) Structure
- b) Life Cycle
- c) Identification

Unit IV — Plants
- a) Maintenance
- b) Value
- c) Lawns
- d) Seeding

Unit V — Plants
- a) Chemicals
- b) Insecticides
- c) Fertilizers
- d) Safety

Unit VI — Conservation
- a) Natural
- b) Man-Induced
- c) Repair

GROUNDSMAN-GARDENER COURSE
Summer - June, 1966
Oakland High School

Unit I

OUTLINE	PROCEDURE	ACTIVITIES
1. Water A. Sources	1. Class discussion of purpose of course. a. Life dependent upon water b. Role of water sources population and vegetation near water c. Discuss water sources (1) oceans (2) lakes (3) rivers (4) wells	1. Dictionary work: Look up and record meaning of new words in unit notebook. source cycle evaporation precipitation arid nimbus cumulus cirrus irrigation vegetation condensation distribution dependent circulation influence tropic frigid productive
B. Water-cycle	1. Explanation of Water-cycle. a. Evaporation b. Precipitation 2. Importance of Water-cycle a. Redistribution b. Revitalizing c. Irrigation	1. Draw in unit notebook a picture illustrating water-cycle 2. Show film, "Pipeline to the Sky"
C. Weather	1. Weather discussion, relating personal incidents, stories or encounters a. Importance of weather to life b. Influencing factors of weather--rain forest, desert c. Describe several types of storms	1. Collect and paste pictures in scrapbook, depicting water, cloud formations, weather scenes 2. Show film

GROUNDSMAN-GARDENER COURSE
Summer - June, 1966

OUTLINE	PROCEDURE	ACTIVITIES
D. Irrigation	1. Need for irrigation a. Natural b. Man-made (1) wells (2) pumps (3) canals (4) sprinklers (5) icing clouds (6) rain dances	1. Perform simple experiments a. Evaporation b. Condensation c. Seeking water level 2. Show film
E. Summarize and Conclude	1. Review discussion on week's procedure and activities	1. Quiz 2. Student help for make-up activities

GROUNDSMAN-GARDENER COURSE
Summer - June, 1966

Unit II

OUTLINE	PROCEDURE	ACTIVITIES
1. Soil A. Rocks	1. Discuss three basic rock types. a. Sedimentary b. Igneous c. Metamorphic 2. Talk about the earth's changing surface: The creation of mountains, deserts and canyons.	1. Dictionary work: Look up vocabulary words and record in notebook. soil fertile sedimentary igneous metamorphic decay glacier volcano shale granite slate minerals demonstrate dune lava 2. O'Donald lecture on rocks and soils
B. Rock erosion	1. Explain how following cause rock erosion: a. wind b. water c. heat d. cold e. decay f. roots	1. Begin work on planter flats. Suggest working and planting two flats with poor soil to demonstrate importance of basic soils 2. Show film
C. Soil Types	1. Discuss kinds of soils. a. sandy b. loam c. clay d. silt e. gravel	1. O'Donald lecture on soil types and soil maintenance. 2. Rock Display 3. Film

GROUNDSMAN-GARDENER COURSE
Summer - June, 1966

Unit II, cont'd

OUTLINE	PROCEDURE	ACTIVITIES
D. Soil conditioning	1. Discussion of soil needs. a. Natural factors (1) worms (2) roots (3) insects (4) rodents b. Man-induced factors (1) chemicals (2) artificial aids (3) plows, etc.	1. Watering and placing flats in sun and shade. 2. Show film
E. Conclusion	1. Review units highlights	1. Oral discussion 2. Quiz 3. Film 4. Make-up work

GROUNDSMAN-GARDENER COURSE
Summer - June, 1966

Unit III

OUTLINE	PROCEDURE	ACTIVITIES
1. Plants A. Structure	1. Discuss the importance of plants to life. a. Human b. Animal c. Plants 2. Introduce two basic types of plants. a. Green b. Dependent	1. Dictionary: Look up and record new words in notebook. chlorophyll roots stem petal sepal stamen pistil pollen pollination seeds bacteria mold spore 2. Mr. O'Donnell talk on plants structure.
B. Structure (cont'd.)	1. Illustrate parts of a flower. a. Roots b. Stem c. Petal d. Sepal e. Stamen f. Pistil	1. Draw and label parts of a flower in notebook. Page 245 "Discovering Our World" 2. Show film
C. Life Cycle	1. Describe life cycle of plants from seed to mature plant to seed.	1. Illustrate in notebooks the steps in the life cycle. Page 249 "Discovering Our World" 2. Continue collection of pictures in scrap notebook.

GROUNDSMAN-GARDENER COURSE
Summer - June, 1966

OUTLINE	PROCEDURE	ACTIVITIES
D. Identification	1. Show different kinds of seeds such as: a. Peach b. Tomato c. Bean d. Wheat, etc.	1. Field walk around school for identification of local flora. 2. Draw in notebooks several types of seeds.
E. Conclusion	1. Review weeks studies. Ask questions orally.	1. Show film 2. True and false quiz.

GROUNDSMAN-GARDENER COURSE
Summer - June, 1966

Unit IV

OUTLINE	PROCEDURE	ACTIVITIES
1. Plants A. Maintenance and care	1. Class discussion of the feeding, trimming and pruning. Draw examples from first and second week of work experience.	1. O'Donnell lecture on plant care. 2. Dictionary work: Record in notebook definitions of following words: maintenance prune trim perennial biennial annual cycad latex fiber symptom mulch botanical spore
B. Value of plants	1. Discuss the general value of plants as to: a. food b. shelter c. beauty	1. Record various types of food plants: Perennials Root crops Cole crops Leaf crops Vine crops (p. 334-335 "Western Garden Book") 2. Continue work on class scrapbooks

OUTLINE	PROCEDURE	ACTIVITIES
C. Lawns	1. Explanation of purpose of lawns and types. a. bent b. fescue c. blue d. clover e. St. Augustine f. Bermuda g. dichondra	1. O'Donnell talk on lawns. a. preparing b. Care of established lawns c. Brief history of lawns
D. Seeding and Installing	1. Class discussion concerning: a. preparing soil b. seeding c. feeding d. watering e. mowing	1. Make a list of lawn diseases, common lawn weeds and insects. (Ref: "Western Garden Book", pp. 110-114) 2. Check planter flats for moisture content of soil and thinning.
E. Conclusion	1. Review important points brought out during week 2. Complete assignments made during week.	1. Look up and record in notebooks the characteristics of seven lawn types. a. bent b. fescue c. blue d. clover e. St. Augustine f. Bermuda g. dichondra

OUTLINE	PROCEDURE	ACTIVITIES
1. Plants A. Chemicals	1. Discuss general chemical control of plants and crops. 2. Review overall purposes of the summer groundsman-gardener course.	1. O'Donnell lecture on use of chemicals 2. Record in notebooks definitions of the following words: desolve acid limestone decay compound cells source cultivate mineral spray variety production control chemical cide fertilize
B. Insecticides	1. Read and discuss sections of the chapter on Garden care, pages 40-54, "Western Garden Book" 2. Discuss the importance of the chemical DDT. Page 116 and page 215 "Discovering Our World"	1. Record in notebook rules of a good Pest Control Program--pages 40-41, "Western Garden Book" 2. Show film 3. In your notebook make a list of common chemical insecticides and the main purpose for their use. Page 51, "Western Garden Book"

GROUNDSMAN-GARDENER COURSE
Summer - June, 1966

OUTLINE	PROCEDURE	ACTIVITIES
C. Fertilizers	1. Discuss some of the common soil problems. Refer to "Western Garden Book", pp. 28-30.	1. O'Donnell lecture on soil deficiencies and the general use of fertilizers. 2. Show film 3. Record in notebooks the four basic soil mixes page 32, "Western Garden Book".
D. Safety	1. Carefully point out the hazards of chemical insecticides and some fertilizers. Discuss caution in handling and antidotes	1. Show film 2. Inspect labels of cans and packages in classroom. 3. Record in notebooks several cautions and antidotes.
E. Conclusion	1. Review week's work	1. Complete unfinished work assigned during week. 2. Inspect and thin planters.

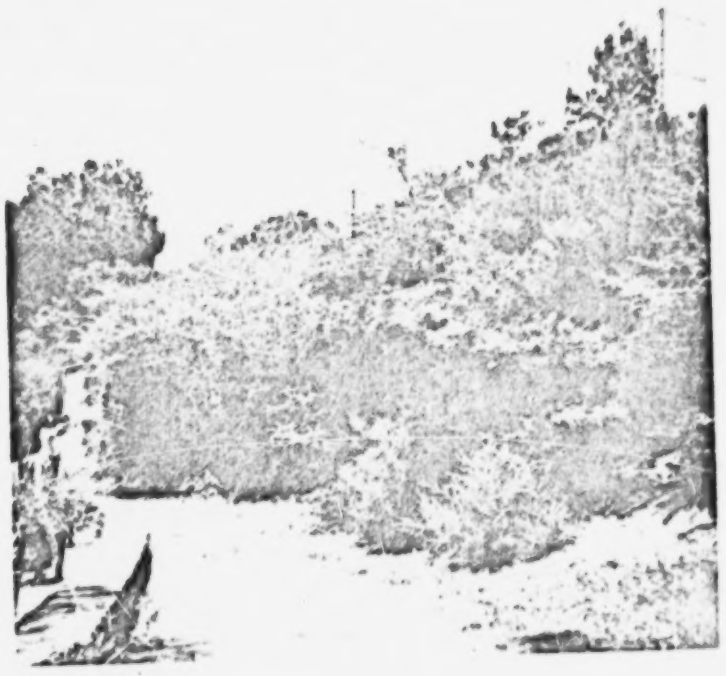
Unit VI

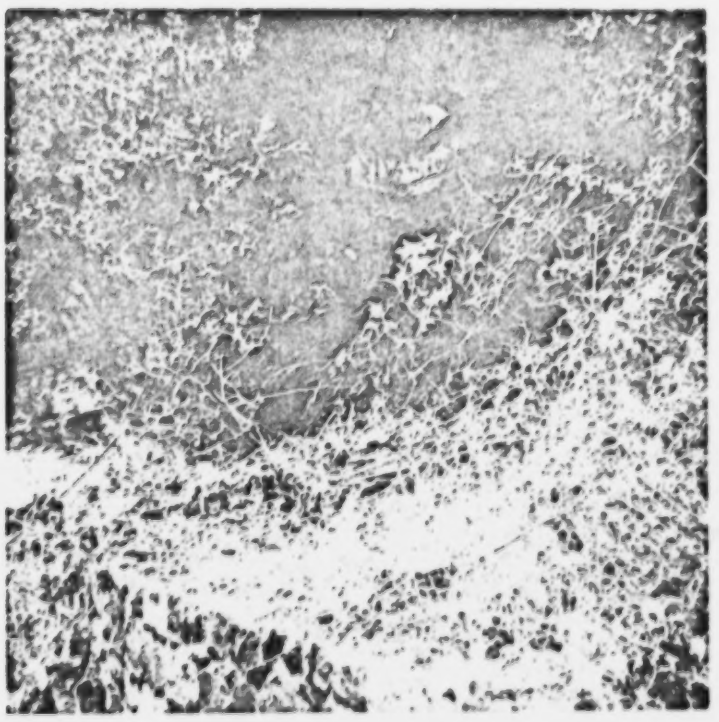
OUTLINE	PROCEDURE	ACTIVITIES
1. Conservation A. Natural	1. Discuss general principles of conservation (pp. 26-28, "Discovering Our World")	1. O'Donnell lecture on the value and need of conservation. 2. Dictionary work: Look up and record in note books the following words: levee gully irrigation erosion contour rotation succession solution erupt canal conserve conservation resource selective polute exhaust
B. Man-induced	1. Class discussion on methods of conservation a. canals b. dams c. reforestation d. levees e. sowing by airplane f. irrigation g. contour plowing	1. Show film: "T.V.P." 2. Record in notebooks kinds of erosion and methods of repair and control, pp. 87-92, "Discovering Our World"
C. Repair	1. Discuss value of a. crop rotation b. ground cover c. reforestation d. dams and levees e. contour plowing	1. Complete and hand in class notebooks 2. Show film: "Modern Forests"

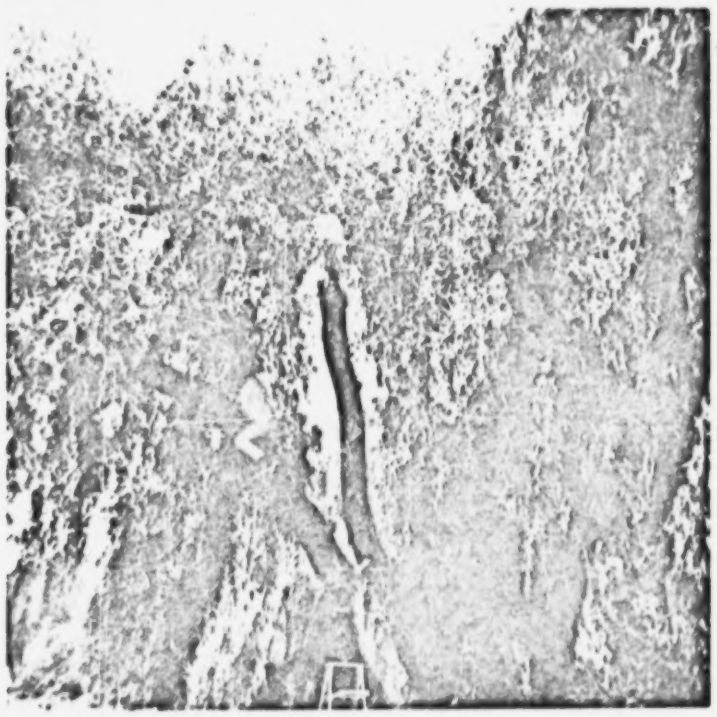
GROUNDSMAN-GARDENER COURSE
Summer - June, 1966

OUTLINE	PROCEDURE	ACTIVITIES
D. Conclusion	1. Review major areas covered during units (recapitulation). 2. Prepare to culminate program.	1. Clean, sharpen and store all tools. 2. Turn in class notebooks. 3. Check all pages and erase any marks and repair pages. 4. Distribute plants from flats. Clean and store all flats. 5. Return all audio-visual materials. 6. Return texts and supplementary materials.

MONTCLAIR
RECREATION CENTER
OAKLAND RECREATION DEPARTMENT







Appendix F-1

Groundsman-Gardener WEE Program Questionnaire - II

Now that you have completed this course, do you think that you would:

1. Look for part-time Gardening work 1
2. Take the regular Gardening class 2
3. Ask for a Gardening work-experience station 6
4. Get more Gardening training after graduation 3
5. Undecided 2

Appendix F-2

Groundsman-Gardener Summer WEE Program Questionnaire

1. Which part of the class do you like best?

--	3	13
morning	afternoon	both

2. Would you recommend the Groundsman-Gardener course to your friends?

9	2	5
yes	no	not sure

3. Are you taking this course for the

3	1	12
money	credit	both

4. Do you think this course will help you get a job?

12	--	4
yes	no	not sure

DEPARTMENT OF REHABILITATION
DIVISION OF VOCATIONAL REHABILITATION
FORM VR-8 (7-62)

REPORT OF PROGRESS IN TRAINING

Month ending _____ 19____

1. NAME OF TRAINEE _____ VRS Counselor _____

2. Calendar School Days Absent (Please (X) out dates absent): If no absences, check here ☐

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. Reason(s) for absence(s) _____

4. Did trainee notify you of his absence(s)? ☐ Yes ☐ No Comments _____

_____

5. Number of hours of instruction given this month: _____ hours

6. Subjects or operations this month—with grades (A for excellent; B for good; C for fair; D for poor; F for failing—Indicate words per minute if typing or shorthand)

Subjects or operations	*Grade*	*Subjects or operations*	*Grade*

7. Cooperation and attitude in training (*please comment*): _____

_____

_____

8. Difficulties with training course (*please comment*): _____

_____

_____

_____

9. In your judgment, does trainee have the talent, personality, educational and other qualifications necessary to succeed in this type of work? ☐ Yes ☐ No ☐ Questionable

If not or questionable, explain: _____

_____

10. How much more time will trainee require (approximately) to complete training? _____

11. How much are you paying the trainee in wages? _____

12. Recommendations for improving performance and other comments. (*Use reverse side if more space is needed*):

_____

_____

_____

13. Department use only:

Business Enterprise Officer—Comments: _____

_____

_____

NOTE:—Bills cannot be processed for payment unless accompanied by a completed report.

Training Agency _____

Address _____

[SIGNED] _____
Person in charge of training

60189-809 6-65 25M Ⓓ OSP

July 14, 1966

Mr. Roy Nicolaysen
Vocational Training and Placement
c/o Oakland Public Schools
1025 - 2nd Avenue
Oakland, California

Roy:

Enclosed is a letter of appreciation sent to us by the Montclair Tennis Association. As you can see, they noticed the good work you people were doing in giving our area a lift. I thought you might like to have this to back up our praise on this project.

Sincerely,

Bert

Bert M. Trubody, Superintendent
Construction and Maintenance

BMT/mf
Enc.

Appendix F-4, cont'd

JUL 15 1966

July 5, 1966

Mr. Jay Verlee
Recreation Department
1520 Lakeside Drive
Oakland, California

Dear Mr. Verlee:

The members of the Montclair Tennis Association have noticed and commented appreciatively to each other on the work that is being done on and around the two courts in the Montclair Park. The areas surrounding the courts have been cleaned up and the shrubbery trimmed, and in some cases replanted. The courts are now in excellent playing condition.

The Board of Directors, as representatives of the Club would like to say "Thank You" and to continue to do what we can to keep the courts in excellent playing condition.

Sincerely,

Geo. S Baker pres.

Board of Directors
Montclair Tennis Association

Duane A. Loerch
M Smith
Louis Bresso
Faye Edwards
Vera Schwab
Georgia Buckley

RECREATION DEPARTMENT

of the

City of Oakland

AWARD

Wilbur L. Beauchamp, et al
"Discovering the World"
Scott, Foresman & Co., Chicago, Ill., 1957

L.H. Bailey
"The Standard Cyclopedia of Horticulture"
Vols. I, II, III
The MacMillan Co., New York, 1963

Gerald S. Craig, et al
"The Earth Then and Now"
Ginn & Co., New York, 1960

Frederick L. Fitzpatrick, et al
"Living Things"
Henry Holt & Co., New York, 1953

Paul C. Johnson, et al
"Western Garden Book"
Lane Book Co., Menlo Park, Calif., 1961 (Revised)

Kay L. Ware, et al
"The World About You"
The Steck Co., Austin, Texas, 1958

John C. Winston
"The Winston Dictionary for Schools"
Chicago, Ill., 1955

"Sunset, The Magazine of Western Living"
Menlo Park, Calif.

Presented by
Recreation Commission

Jay M. Lee
Superintendent of Recreation

Dated _____

Recreation Director

BIBLIOGRAPHY

Wilbur L. Beauchamp, et al
"Discovering Our World"
Scott, Foresman & Co., Chicago, Ill., 1957

L.H. Bailey
"The Standard Cyclopedia of Horticulture"
Vols. I, II, III
The MacMillan Co., New York, 1963

Gerald S. Craig, et al
"The Earth Then and Now"
Ginn & Co., New York, 1940

Frederick L. Fitzpatrick, et al
"Living Things"
Henry Holt & Co., New York, 1953

Paul C. Johnson, et al
"Western Garden Book"
Lane Book Co., Menlo Park, Calif., 1961 (Revised)

Kay L. Ware, et al
"The World About You"
The Steck Co., Austin, Texas, 1958

John C. Winston
"The Winston Dictionary for Schools"
Chicago, Ill., 1955

"Sunset, The Magazine of Western Living"
Menlo Park, Calif.

AUDIO-VISUAL MATERIALS

The Heritage That We Guard (30 min.)
Nature Nextdoor (28 min.)
Rival World (27 min.)
What is Ecology? (11 min.)
Flowers at Work (11 min.)
Role of the Green Plant (27 min.)
Roots of Plants (11 min.)
Seed Dispersal (11 min.)
Wild Flowers of the West (30 min.)
Horizons (30 min.)

Conservation Story (25 min.)
Conserving Our Forests Today (11 min.)
Conserving Our Soil Today (11 min.)
Conserving Our Water Resources Today (11 min.)
Forever Living Forest (27 min.)
Guarded Treasure (11 min.)
Guardians of the Wilds (10 min.)
Science Conserves the Forest (15 min.)
Two Yosemites (10 min.)
Yosemite (18 min.)
California, the Desert (10 min.)
Nature's Half Acre (33 min.)
Cotton Planting (30 min.)
Date Culture in the United States (11 min.)
Fungi (27 min.)
Grapes (11 min.)
Leaves (11 min.)
Osmosis (15 min.)
Plant Growth (10 min.)
Redwood Trees (15 min.)
Rain Forests (30 min.)
Our Weather (11 min.)
Work of our Rivers (11 min.)

Film Strips

Nature's Half Acre
Nitrogen Fixation
Conserving Our Soil in Water
Improving Our Grass Lands
Saving Our Soil
What is Conservation?